

STATINTL

29 May 1962
CO-194 / P-259

Central Intelligence Agency
Washington 25, D.C.

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Attn: [REDACTED] Contracting Officer
[REDACTED] Technical Representative

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Gentlemen:

We are pleased to submit a CFF proposal for an Input Inspection, Selection and Preparation Device for the Multiple Image Correlator developed under Contract [REDACTED].

During the initial discussions it was suggested by the technical representative of the Contracting Office that the cutting device be notched. Subsequent evaluation has shown that there is no real requirement for a notch, since each stage is easily adjusted for a full 360° swing. Moreover, the most effective and least expensive method of cutting would preclude a notch arrangement.

The Cost Proposal as set forth in Exhibit "A" covers the equipment described in the Technical Proposal, which will be delivered two (2) months after the day of contract.

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[REDACTED] wishes to assure you of our continued support and cooperation.

Very truly yours,

STATINTL

[REDACTED]
Manager, Administration

rw
Enclosures: Exhibit "A" - Cost Proposal
Technical Proposal

Declass Review by NIMA/DOD

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INPUT INSPECTION, SELECTION AND PREPARATION DEVICE
FOR THE MULTIPLE IMAGE CORRELATOR

Proposed as Task Order No. 6 to Contract XG-2267

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PROPRIETARY STATEMENT

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INPUT INSPECTION, SELECTION AND PREPARATION DEVICE FOR THE MULTIPLE IMAGE CORRELATOR

I. INTRODUCTION

Under Task Order No. 2 of Contract XG-2267, FMA recently brought to successful completion the development of a multiple image correlator. The purpose of the correlator is to improve the definition of extremely small or greatly subdued photo images by precisely aligning from two to eight transparencies of essentially identical* exposures, then photographing and viewing the result. The transparencies are first given a rough visual alignment, then they are aligned accurately by electronic circuitry. The reference transparency and the transparency to be aligned with it are scanned simultaneously by a flying spot generated by a cathode ray tube. The operator observes the signals which result from the scanning operation on the face of an oscilloscope, and uses this information to orient the transparency to be aligned in x, y, and θ (rotational alignment).

To simplify equipment operational procedures, FMA proposes to design and build a device which will facilitate the examination of transparencies and expedite the preparation of specific areas for insertion into the correlator equipment film holders.

*The term "identical" is used here to describe photographs of the same object taken from the same point at approximately the same time.

Proposed Task Order No. 6
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II. SCHEDULE

A. Scope of Work

The Contractor shall complete the equipment specifications based on proposed preliminary designs (see Section III), and shall procure and/or construct all materials and components necessary to the accomplishment of said task, and further shall assemble and test all components to ensure efficient equipment operation. The completed equipment shall be delivered to the Customer within two months from the date of contract initiation.

B. Purpose

The purpose of the above work shall be to improve the value of the present correlator equipment by improving upon the techniques for preparing specific portions of the transparencies to be used in the correlation equipment.

C. Reports

A project engineer plus an engineer drawn as needed from the staff shall perform specific technical tasks, including the preparation of reports. These reports shall include:

1. A Final Report summarizing results of tasks indicated in Scope of Work, above.

2. An Operator's Manual giving complete instructions for the proper operation and maintenance of said equipment.

D. Anti-Publicity

While this contract, material and/or service thereof is unclassified, it is specifically agreed that the Contractor shall not use, nor in any way publicize this contract, the subject matter thereof, or the Contractor's association therewith for any publicity purpose or for any purpose promotional of the Contractor's business or technical reputation.

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III. PRELIMINARY DESIGN REQUIREMENTS

A. General Description

The equipment (see Figure 1) shall consist essentially of: 1) a light table for the visual inspection of photographic transparencies of varied sizes; 2) a backlighted glass cross-hair alignment disc centrally located and flush with the top of the table for aligning areas of interest to be cut out and prepared for insertion into the correlation equipment; and 3) a cutting device designed and mounted so that, when brought into contact with a transparency placed over the alignment disc, it shall hold the film firmly in place and cut out a one-inch circle of film containing the area of interest centered at the intersection of the two cross hairs.

B. Details

Figure 2 shows a cutaway drawing of the light table and cutting mechanism.

The light table consists of two flashed-opal glass plates placed one above the other to provide sufficient light diffusion over a 10x10-inch area. Backlighting is provided by fluorescent lamps.

A phenolic ring surrounds the glass alignment disc to serve as a backup surface for the cutting head, and can be removed and replaced with a new ring when the old one becomes worn. A tubular support reinforces the backup ring from beneath to sustain the pressure from the cutting head. This tube contains a lamp to backlight the glass alignment disc.

The cutting device is manually operated by a toggle clamp which, when pulled forward, brings the cutting head into contact with the phenolic ring, and by a knob which, when rotated, turns a serrated cutting blade and lowers it to cut through the film. The cutting blade is recessed behind a rubber pressure pad so that when the cutting head is locked into position over a film exhibit placed on the alignment disc, the pressure pad holds the film firmly in place during the cutting operation.

DIMENSIONS:
BOX - 14" x 14" x 2 1/2"
GLASS - 10" x 10"
PHENOLIC INSERT - 1 1/4" DIA.
ALIGNMENT DISC - 3/4" DIA.
CUTTING BLADE - 1" DIA.

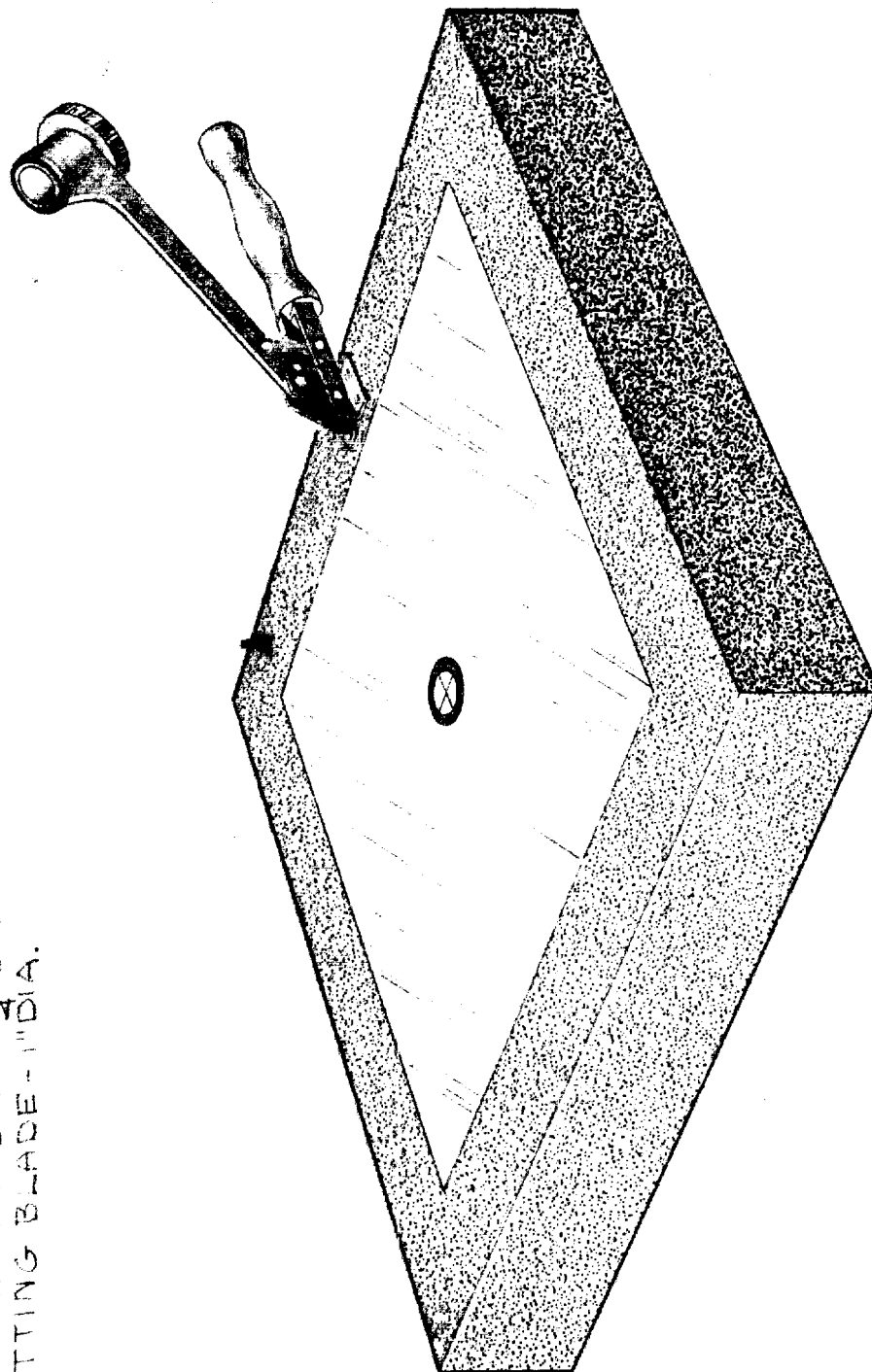


FIGURE 1

INPUT INSPECTION, SELECTION AND REPRODUCTION DEVICE
FOR THE MULTIPLE VALUE CODE SYSTEM

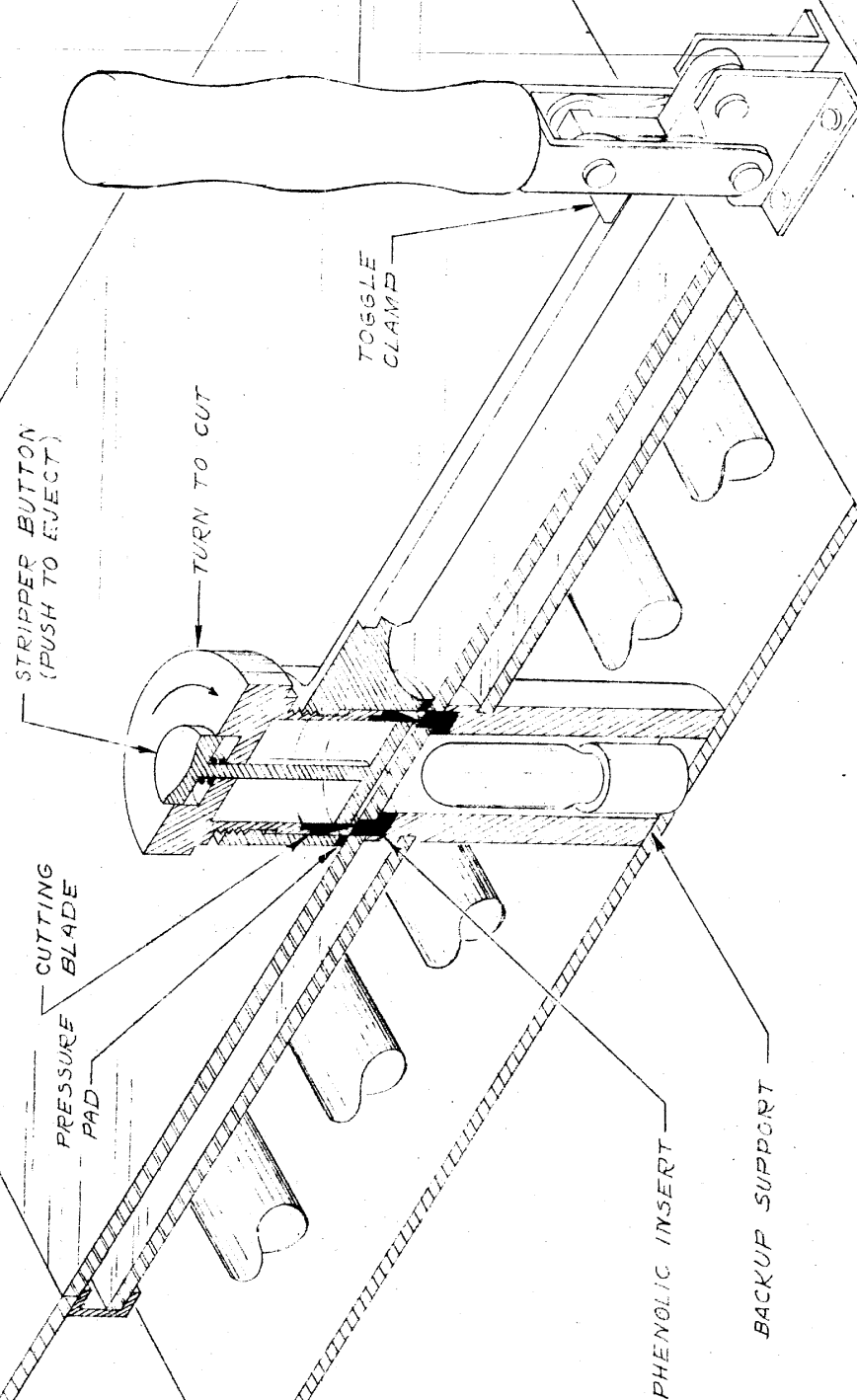


FIGURE 2
CROSS SECTION OF LIGHT TABLE
AND CUTTING HEAD

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C. Operation

The operator examines the transparencies over the light table until he locates a target he wishes to cut out. Then he places the target over the alignment disc and makes note of some point within the image (e.g., the corner of a building) that lies at the intersection of the two cross hairs. This point is the center of the one-inch circle to be cut out. It is also the point of registration for each of the remaining transparencies of the selected target image.

To complete the cutting operation, the operator raises the toggle clamp to lock the cutting head and the film into place. Then, by turning the knob on the cutter head, he lowers the cutting blade until it cuts through the film. By releasing the toggle clamp, the operator raises the cutting head, now containing the one-inch target area cutout. The cutout can be ejected from the cutting head by pressing a stripper button located in the center of the head. The operator then proceeds to locate, align, and cut out each of the remaining transparencies of the selected target for processing in the image correlator.